

List of Contents

NUMBER 1

- i Softstrip® data strip containing the table of contents of this issue
- Lissa Galbraith and William Miller 1 A multifactor approach to selecting computer generated electronics assembly facility layouts
- Joseph A. Svestka 13 MOCRAFT: a professional quality micro-computer implementation of CRAFT with multiple objectives
- Bernard C. Jiang 23 Development of a machine vision system for education
- Guy L. Curry and Bryan L. Deuermeyer 29 An algebraic modeling language and microcomputer environment for linear programming and related optimization methods
- Richard J. Linn and Richard A. Wysk 37 An expert system framework for automated storage and retrieval system control
- Gary E. Whitehouse, J. Greg Hanson and Ali Orooji 49 Application of SLAM in the design and performance analysis of a multi-processor database system
- Tarun Gupta 69 An expert system approach in process planning: current development and its future
- James R. Buck and Tzvi Raz 81 Development and application of parameter maps
- Cem Saydam and James R. Evans 91 A comparative performance analysis of the Wagner-Whitin algorithm and lot-sizing heuristics
- Jeffery K. Cochran and Jinnchyun Chang 95 Optimization of multivariate simulation output models using a group screening method
- Michael J. Henneke and Richard H. Choi 105 Evaluation of FMS parameters on overall system performance

NUMBER 2

- i Softstrip® data strip containing the table of contents of this issue
- Nazar A. Younis and Tom M. Cavalier 111 On locating part bins in a constrained layout area for an automated assembly process
- Jae D. Hong, R. R. Sandrapaty and Jack C. Hayya 119 On production policies for a linearly increasing demand and finite, uniform production rate
- Ernst P. Goss and Bernard J. Schroer 129 The use of spreadsheet packages in industrial engineering—the case of regression analysis with binary dependent variables

Alexis Koster and Feraidoon (Fred) Raafat	133	The applications of a knowledge based expert support system to workers' compensation insurance
Surya Danusaputro, Chung-Yee Lee and Louis A. Martin-Vega	145	An efficient algorithm for drilling printed circuit boards
Christian N. Madu	153	The sensitivity of inventory models with demand trend
John W. Hummel and Richard R. Jesse	163	A spreadsheet heuristic approach for the stocking and retention of slow-moving, obsolescent items
Japhet S. Law	175	Non-cost-based lot-sizing heuristics: a comment on Cheng
R. Ramesh and J. M. Cary	181	An efficient approach to stochastic jobshop scheduling: algorithms and empirical investigations
J. A. Sharp, A. P. Muhlemann, D. H. R. Price, J. K. Andrews and M. J. Afferson	191	Defining production management core applications for smaller businesses
S. Vajpayee and I. Hajjar	201	Recent developments in computer hardware and their effect on computer-integrated manufacturing
S. Vajpayee and A. Sampath	211	Development of a microcomputer-based AE system for tool condition monitoring
Mahmut Parlar	225	Stochastic decision tree analysis on an electronic spreadsheet
Han P. Bao and K. Liou	235	Space maps manipulation for robot motion planning

NUMBER 3

i	Softstrip® data strip containing the table of contents of this issue	
Szu-Yung David Wu and Richard A. Wysk	247	An inference structure for the control and scheduling of manufacturing systems
Sathyakumar Selvaraj, Eric L. Blair, Milton L. Smith and William M. Marcy	263	Discrete event simulation in C with DISC
Jorge Haddock and Robert M. O'Keefe	275	Using artificial intelligence to facilitate manufacturing systems simulation
Dooyoung Shin	285	An efficient heuristic for solving stochastic assembly line balancing problems
Bartholomew O. Nnaji and Saqib Alladin	297	E-CAFFS: an expert computer-aided flexible fixturing system

Jeffrey E. Fernandez, Robert J. Marley and Osama K. Eyada	313 ErgoCAD: an ergonomic CAD system
Heeseok Lee	319 On the integrated inventory problem with items jointly replenished
Fong-Yuen Ding	325 A pairwise interchange solution procedure for a scheduling problem with production of components at a single facility
Hamid Seifoddini	333 Machine-component group analysis versus the similarity coefficient method in cellular manufacturing applications
Kurt M. Bretthauer and M. A. Venkataraman	341 Machine loading and alternate routing in a flexible manufacturing system
Bay Arinze and Fariborz Partovi	351 A knowledge based method for designing precedence networks and performing job allocation in line balancing
James R. Smith	365 Statistical aspects of measurement and calibration
Akif Asil Bulgak and Jerry L. Sanders	373 An analytical performance model for assembly systems with automatic inspection stations and repair loops
Christian N. Madu	381 Simulation in manufacturing: a regression metamodel approach
G. E. Martin and Hon-Shiang Lau	391 Dynamics of the output interval distribution in unpaced lines
G. E. Martin	401 Optimal buffer storage capacity in unpaced lines
Jim Lee and Tzvi Raz	407 A branch-and-bound procedure for robot assembly planning

NUMBER 4

S. Bhatia and M. Ilyas	425 Evaluation of interprocessor communication overhead in distributed computer systems
Mukasa E. Ssemakula and Ajay Satsangi	435 Application of PDES to CAD/CAPP integration
Khalil F. Matta and Hector H. Guerrero	445 Analyzing an inventory system with multiple reorder points and periodic replenishment
Christian N. Madu	457 An economic design for optimum maintenance float policy

Ganesan Nandakumar	471 Bills of material processing with a SQL database
R. Armstrong and C. Haksever	485 Packed data structure and supersparsity savings in a linear programming code
Joseph W. Foster III, Paul M. Griffin, Sherri L. Messimer and J. René Villalobos	493 Automated visual inspection: a tutorial
Paul M. Griffin, J. René Villalobos, Joseph W. Foster III and Sherri L. Messimer	505 Automated visual inspection of bare printed circuit boards
K.-H. Wang and B. D. Sivazlian	511 Comparative analysis for the G/G/R machine repair problem
T. C. E. Cheng	521 A product load profile approach to MRP capacity planning
T. C. E. Cheng	529 An EOQ model with pricing consideration

Computer Applications in Production and Manufacturing Systems

Anil Mital and Abraham Seidmann	V Preface
Zilla Sinuany-Stern and Dmitri Golenko-Ginzburg	535 Physical simulation of a two-stage control algorithm for an FMS
V. Albino, G. O. Okogbaa and R. L. Shell	547 A computerized integrated performance-reliability measure of a flexible automated production system
Stephen D. Burd and Suleiman K. Kassieh	559 The use of AI methodologies in production system modeling
A. M. Genaidy, A. Agrawal and A. Mital	571 Computerized predetermined motion-time systems in manufacturing industries
Boaz Ronen and Martin K. Starr	585 Synchronized manufacturing as in OPT: from practice to theory
Jeongseob Kim and Abraham Seidmann	601 A framework for the exact evaluation of expected cycle times in automated storage systems with full-turnover item allocation and random service requests
	613 Announcement

